Name: ..... **Class:**..... **Mark:**.....

A cinema has a Local Area Network assembled using a star topology. Each customer service till and self service kiosk is connected to the network to enable staff to book tickets and order products. The local area network uses Ethernet protocols.

(a) Define what is meant by the word protocol. [2]

(b) Give **three** reasons why the cinema may have chosen to use a star topology. [3]

The cinema has decided to connect all the tills and kiosks to the switch using Ethernet cable.

(c) State **one** alternative type of transmission media that the cinema could have chosen. [1]

(d) Explain **one** reason why the cinema has chosen Ethernet cable rather than an alternative type of transmission media. [2]

(e) Each device on the network has a unique MAC address which identifies it.

Explain how a MAC address is used by a network switch. [2]

[Total 10 marks]